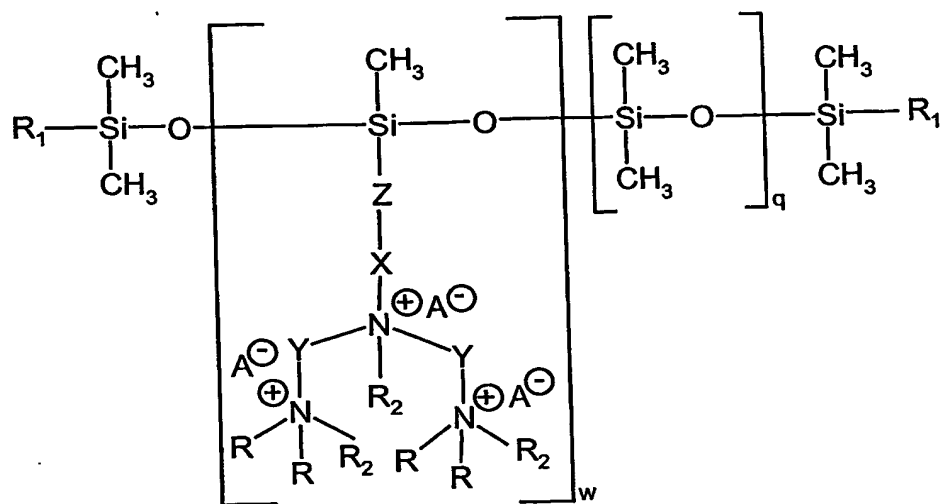


CLAIMS

1. Multiply quaternized polysiloxanes of the formula (S1)

**S1**

where

the sum total of (q + w) has a range of 10-1500 and the q/w ratio has a range of 5-600,

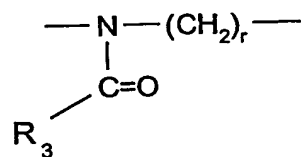
R is C₁-C₄-alkyl, linear or branched,

R₁ is hydrogen, C₁-C₃-alkyl or C₁-C₃-alkoxy,

R₂ is C₁-C₇-alkyl or benzyl,

X is a direct bond

or



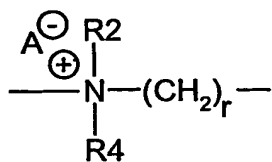
where

r is 1-4 and

R₃ is C₁-C₇-alkyl or -NH-C₁-C₇-alkyl,

23

or



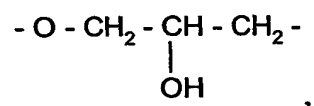
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where

 R_2 and r are each as defined above, R_4 is C_1 - C_3 -alkyl,

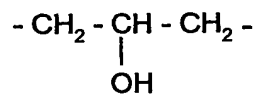
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or



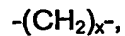
Y is

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or

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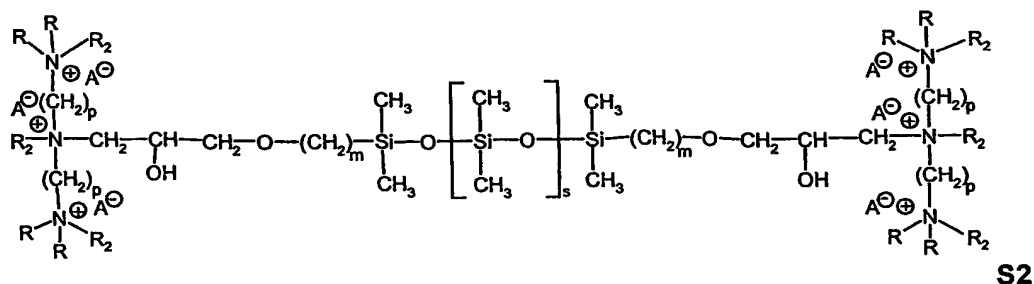
where

 x is 1-4, Z is C_2 - C_4 -alkylene, linear or branched and

25

 A^- is $\text{CH}_3\text{OSO}_3^-$, chloride, bromide, iodide or tosylsulfate⁻,

or of the formula (S2)



where

R, R₂ and A⁻ have the same meaning as in formula (S1),

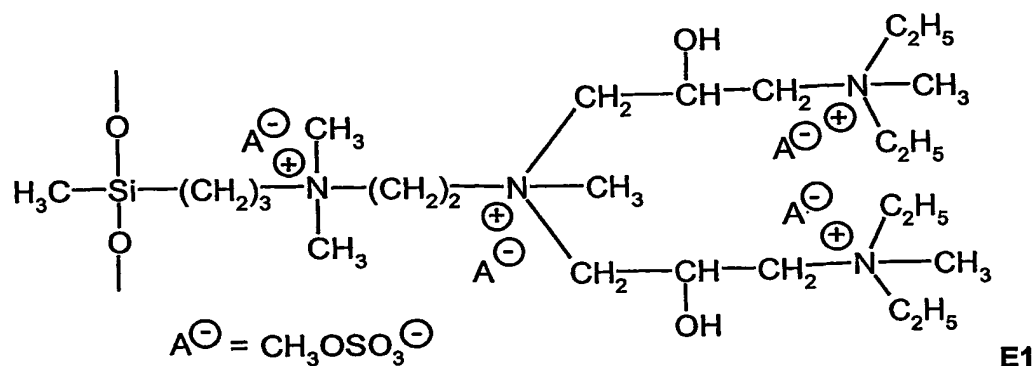
- 5 m is 1 - 4,
 p is 1 - 4, and
 s is 5 - 1500

- 10 2. Multiply quaternized polysiloxanes according to Claim 1 wherein
 the sum total of (q + w) has a range of 15-600 and the q/w ratio has a range of
 10-400,

- 15 R is methyl, ethyl or propyl,
 R₁ is H, methyl, -OCH₃ or -OC₂H₅,
 R₂ is methyl or benzyl,
 R₃ is methyl or -NH-C₄H₉,
 R₄ is methyl,
 Z is C₃-alkylene, linear or branched,
 A⁻ is CH₃OSO₃⁻ or chloride,
 m is 3,
 p is 3,
 s is 10 - 600,
 r is 2, and
 x is 3.
- 20
25

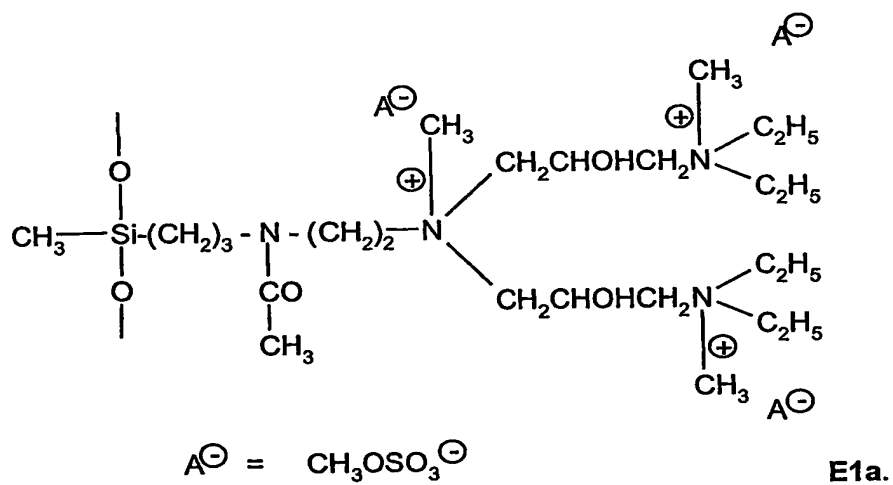
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3. Multiply quaternized polysiloxanes according to Claim 1 or 2 having structural units of the formula E1



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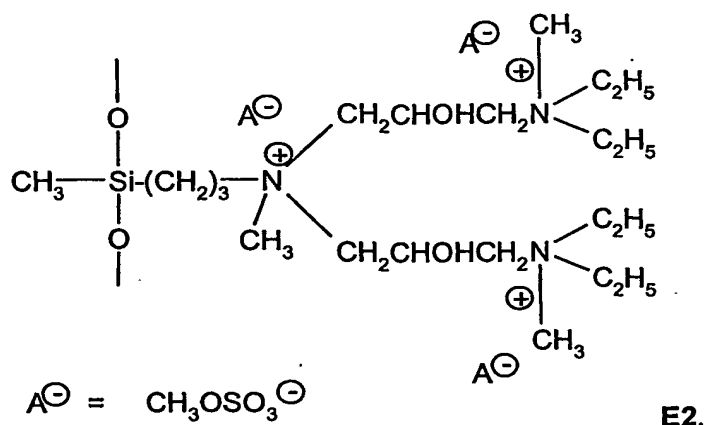
or having structural units of the formula E1a



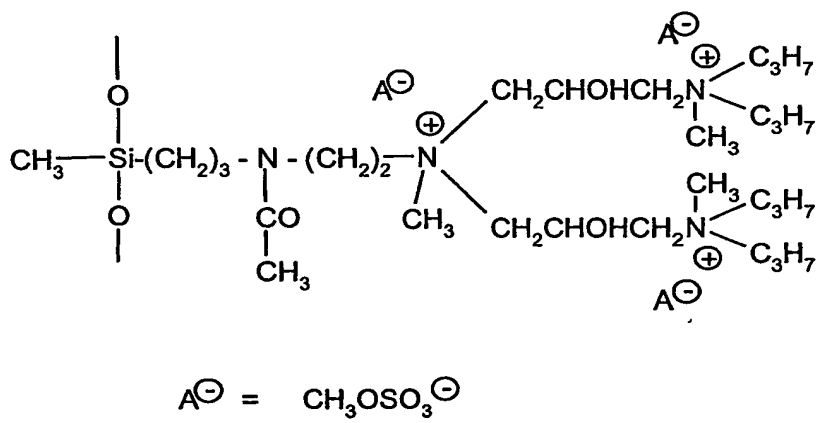
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4. Multiply quaternized polysiloxanes according to Claim 1 or 2 having structural units of the formula E2

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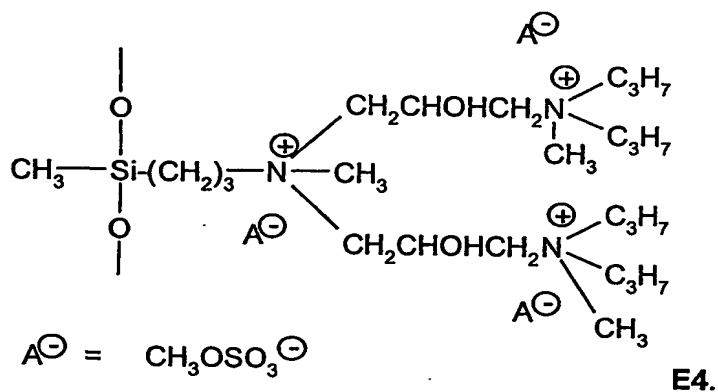


5. Multiply quaternized polysiloxanes according to Claim 1 or 2 having structural units of the formula E3

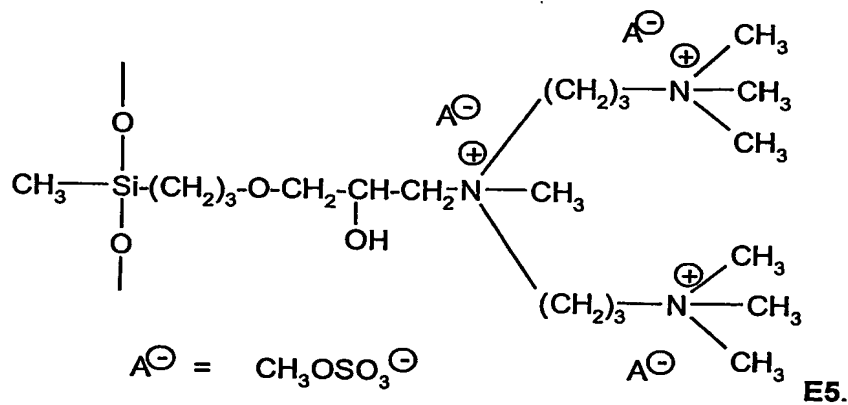


- 10 6. Multiply quaternized polysiloxanes according to Claim 1 or 2 having structural units of the formula E4

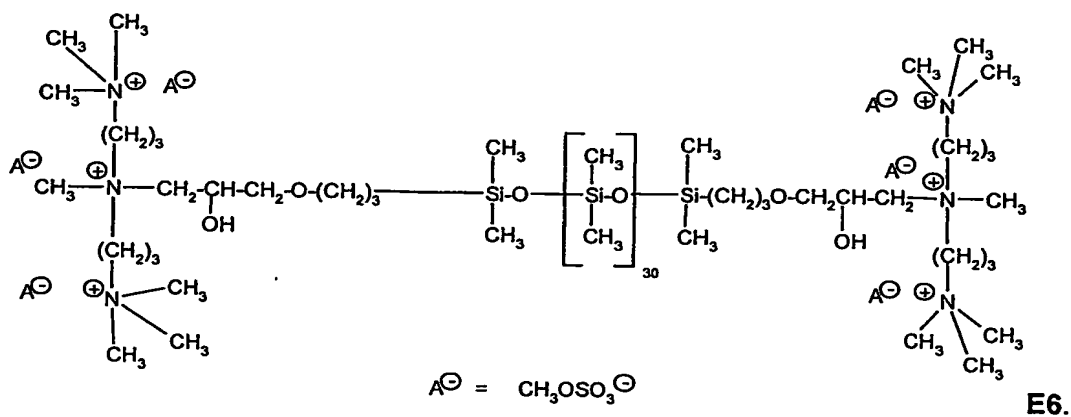
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7. Multiply quaternized polysiloxanes according to Claim 1 or 2 having structural units of the formula E5



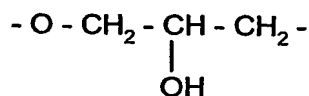
8. Multiply quaternized polysiloxanes according to Claim 1 or 2 of the formula E6



9. Process for preparing multiply quaternized polysiloxanes of the formula (S1) according to any one of Claims 1 to 6, characterized in that the following reactions are carried out:

- 5 A) reaction of dialkylamine with epichlorohydrin to form a glycidydialkylamine,
 B) reaction of the glycidydialkylamine with 3-aminoalkyldialkoxymethylsilane or with 3-(2-aminoalkylamino)alkyldialkoxymethylsilane to form the corresponding silanes,
 10 C) reaction of the resultant silanes with polydimethylsiloxanediol or with octamethylcyclotetrasiloxane or with tetraalkyl- or aryltrialkyl-ammonium hydroxide to form polysiloxanes, with subsequent quaternization to form the multiply quaternized polysiloxanes.

- 15 10. Process for preparing multiply quaternized polysiloxanes of the formula (S1) where Y is $-(CH_2)_x-$ and X is



- 20 characterized in that the following reactions are carried out:

- A) reaction of N'-[3-(dialkylamino)alkyl]-N,N-dialkylalkane-1,3-diamine with dialkoxy(3-glycidyloxyalkyl)methylsilane,
 B) reaction of the reaction product from A) with polydimethylsiloxanediol or with octamethylcyclotetrasiloxane, with subsequent quaternization.

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11. Process for preparing multiply quaternized polysiloxanes of the formula (S2) according to Claims 1 or 2, characterized in that the following reactions are carried out:

- 30 A) reaction of octaalkylcyclotetrasiloxane with 1,1,3,3-tetraalkyldisiloxane,
 B) reaction of the reaction product from A) with an allyl glycidyl ether and a hydrosilylation catalyst;
 C) reaction of the reaction product from B) with N,N,N',N'-tetraalkyldialkylenetriamine to form the polysiloxane and subsequent
 35 quaternization.

12. Use of multiply quaternized polysiloxanes according to Claims 1 to 8 as a softener in the textile industry.